

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF HICKORY WATER)
DISTRICT FOR (1) ISSUANCE OF A CERTIFICATE)
OF PUBLIC CONVENIENCE AND NECESSITY FOR)
CONSTRUCTION OF THE 1998 INDUSTRIAL PARK)
WATER SYSTEM IMPROVEMENTS; (2))
AUTHORIZATION TO BORROW \$528,000 FROM)
KENTUCKY INFRASTRUCTURE AUTHORITY; AND)
(3) AUTHORIZATION TO RAISE RATES TO PAY)
FOR THE ADDITIONAL INDEBTNESS)

CASE NO. 99-084

O R D E R

On April 15, 1999, Hickory Water District (Hickory) filed its application for Commission approval of proposed water rates. Commission Staff, having performed a limited financial review of Hickory s operations, has prepared the attached Staff Report containing Staff s findings and recommendations regarding the proposed rates. All parties should review the report carefully and provide any written comments or requests for a hearing or informal conference no later than 10 days from the date of this Order.

IT IS THEREFORE ORDERED that all parties shall have no more than 10 days from the date of this Order to provide written comments regarding the attached Staff Report or requests for hearing or informal conference. If no request for a hearing or informal conference is received, this case will be submitted to the Commission for a decision.

Done at Frankfort, Kentucky, this 17th day of June, 1999.

By the Commission

ATTEST:

Executive Director

STAFF REPORT
ON
HICKORY WATER DISTRICT
CASE NO. 99-084

On March 10, 1999, the Public Service Commission (Commission) received an application from Hickory Water District (Hickory) requesting Commission authorization to construct certain system improvements, issue long-term debt, and adjust rates for water service. The application was considered filed on April 15, 1999, when all deficiencies were cured. On May 14, 1999, the Commission issued an interim order granting approval of the construction and financing; however, the request for rate adjustment was continued until further review could be performed.

In order to review the requested rates Commission Staff (Staff) performed a limited financial review of Hickory's test year operations. The scope of Staff's review was limited to obtaining information as to whether the test period operating revenues and expenses were representative of normal operation. Insignificant or immaterial discrepancies were not pursued and are not addressed herein.

Hickory used the calendar year ending December 31, 1997, as the test year in its application. Staff is of the opinion that the most current and readily available financial information should be used as the test year in most rate case proceedings. At the time of Staff's field review the audit of Hickory's operations for the year ended December 31, 1998, had been completed. Therefore, Staff chose to use that twelve month period as the test year for its review.

Hickory's Pro Forma Operating Income Statement is included in this report as Attachment A. It shows normalized operating revenues to be \$252,759. According to Hickory's application its proposed rates would increase normalized operating revenues by \$85,039 to \$337,798. This exceeds the revenue requirement calculated by Hickory by \$12,081.

As a part of Staff's review a billing analysis was prepared for the year ended December 31, 1998. Staff's billing analysis included a 100 percent sample of test year billings. To determine the exact revenue to be generated from Hickory's proposed rates Staff applied the water usage information in its billing analysis to Hickory's proposed rates. This procedure indicated that Hickory's proposed rates would generate revenues in the amount of \$324,157. Staff considered this amount to be the revenue requirement requested by Hickory. A summary of this calculation is attached hereto as Attachment G.

Staff's Pro Forma Operating Income Statement and explanation of adjustments thereto are shown in Attachment B of this report. Based on Staff's revenue requirement calculation, Hickory could have justified operating revenues from rates of \$332,084. However, Staff recommends that Hickory's requested revenue of \$324,157 be granted since it will produce revenues sufficient to pay the immediate annual debt payments and pro forma cash expenses as delineated in Attachment B. A comparison of Hickory's and Staff's revenue requirement calculations is shown in Attachment C.

The rates listed in Attachment D will produce the recommended revenue and should be approved by this Commission. The recommended rates were determined using the cost of service study shown in Attachment E. Attachment F is a summary of

the billing analysis wherein normalized operating revenues at present rates were calculated.

Renee Curry is responsible for all revenue adjustments, the calculation of the recommended rates, the billing analysis, and the cost of service study. Scott Lawless is responsible for the determination of the revenue requirement. Based on the information contained in this report, Staff recommends that the rate proposed by Hickory be denied and the rates shown in Attachment D be approved for service.

If Hickory chooses to amend its application to reflect rates that will generate the revenue requirement calculated by Staff, it should do so when filing comments to this report. In the event that Hickory does request rates that differ from those previously noticed to its customers, it should be required to renotify its customers of the new proposed rates.

Signatures

Prepared by: Jack Scott Lawless, CPA
Financial Analyst, Water and Sewer
Revenue Requirements Branch
Division of Financial Analysis

Prepared by: Renee Curry
Rate Analyst, Communications, Water,
and Sewer Rate Design Branch
Division of Financial Analysis

ATTACHMENT A
 STAFF REPORT CASE NO. 99-084
 HICKORY S REQUESTED OPERATIONS

	Test Year Ended 12/31/97	Adjustments	Pro forma Present Rates
Operating Revenue			
Water Sales	241,784	10,975	252,759
Other Operating Revenue	-		-
Total Operating Revenue	241,784	10,975	252,759
Operating Expenses			
Operation and Maintenance			
Purchased Power	20,824	4,860	25,684
Chemicals	14,311		14,311
Materials and Supplies	11,442		11,442
Contractual Services	98,097		98,097
Insurance	1,465		1,465
Miscellaneous Expenses	1,037		1,037
Total Operation and Maintenance	147,176	4,860	152,036
Depreciation	59,299	19,417	78,716
Taxes Other Than Income	445		445
Total Operating Expenses	206,920	24,277	231,197
Net Operating Income	34,864	(13,302)	21,562
Plus: Interest Income	5,912		5,912
Income Available to Service Debt	40,776	(13,302)	27,474

ATTACHMENT B
STAFF REPORT CASE NO. 99-084
STAFF S RECOMMENDED OPERATIONS

	Test Year Ended 12/31/98	Adjustments	Ref.	Pro forma Present Rates
Operating Revenue				
Water Sales	235,812	7,569	A	243,381
Other Operating Revenue	6,386			6,386
Total Operating Revenue	242,198	7,569		249,767
Operating Expenses				
Operation and Maintenance				
Purchased Power	20,713	4,860	B	25,573
Chemicals	9,254	440	C	9,694
Materials and Supplies	8,810	(2,961)	D	5,849
Contractual Services	96,311	560	E	96,871
Insurance	2,526			2,526
Miscellaneous Expenses	1,578			1,578
Total Operation and Maintenance	139,192	2,899		142,091
Depreciation	63,117	25,782	F	88,899
Taxes Other Than Income	442			442
Total Operating Expenses	202,751	28,681		231,432
Net Operating Income	39,447	(21,112)		18,335
Plus: Interest Income	5,379			5,379
Income Available to Service Debt	44,826	(21,112)		23,714

ATTACHMENT B
STAFF REPORT CASE NO. 99-084
STAFF S RECOMMENDED OPERATIONS

A) Water Sales. During 1997 Hickory reported water sales revenue of \$241,784 which it proposed to increase by \$10,975 to \$252,759. The adjustment was calculated by Hickory using a billing analysis for the twelve months ending August 31, 1998.

Water sales for 1998 were reported at \$235,812. Staff increased test year water sales by \$7,569. This adjustment included an increase of \$3,194 to reconcile test year revenue to the billing analysis for the calendar year ended 1998 and an increase of \$4,375 for additional revenue resulting from sales to Remington Arms, Inc. The additional sales to Remington were based on the estimated daily demand of 15,000 gallons as stated in Hickory s application.

B) Purchased Power. Hickory proposed to increase purchased power by \$4,860 to reflect energy costs necessary to operate the new pump that will be used to fill the proposed storage tank. The adjustment was calculated by applying a charge of \$.075 per kwh to the estimated amount of kwh s necessary to operate the pump for 8 hours per day. Staff agrees with the adjustment and has included it in pro forma operations.

C) Chemicals. Staff increased test year chemicals to reflect the increased cost that will result from serving Remington Arms, Inc. The adjustment increased operating expenses by \$440. To calculate the adjustment test year chemical cost per 1,000 gallons of water sold of \$0.08142 (test year chemical expense, \$9,254 / test year 1,000 gallons of water sold, 113,663) was applied to the anticipated annual water usage of Remington of 5,400 (15,000 gallons per day x 360 days / 1,000 gallons).

ATTACHMENT B
STAFF REPORT CASE NO. 99-084
STAFF S RECOMMENDED OPERATIONS

D) Materials and Supplies. The following meter supplies were included in test year operating expenses:

Vendor	Check #	Amount
G&C Supply	7431	280.00
Midstates Meter	7432	769.00
G&C Supply	7595	147.00
Consumer Water District	7598	769.00
U.S. Filter	7654	594.00
Midwest Meter	7657	<u>402.00</u>
Total		<u><u>2,961.00</u></u>

These items should have been capitalized as a part of utility plant in service and depreciated over their useful lives. Staff has eliminated them from test year operations and provided for their recovery through an adjustment to test year depreciation expense.

E) Contractual Services. Included in test year contractual services was \$840 paid to United Systems Software for billing reports that were included in Hickory's application. All fees related to the application were included in the total project cost to be financed. Therefore, Staff eliminated this amount from test year operations.

Hickory has three Commissioners. In April of 1998 each Commissioner started receiving \$200 per month for commissioner fees. The total amount paid during the test year for these services was \$5,800. Test year operating expenses were increased \$1,400 ((600 x 12) - 5,800) to reflect 12 months of commissioners fees.

The recommended net increase to test year Contractual Services is \$560 (1,400 - 840).

F) Depreciation. Hickory proposed to increase depreciation expense by \$19,417 to include the recovery of the proposed construction costs. Hickory's adjustment was

ATTACHMENT B
STAFF REPORT CASE NO. 99-084
STAFF S RECOMMENDED OPERATIONS

calculated using cost estimates of the tangible plant of \$771,860. Its adjustment did not include recovery of the \$256,140 administrative and miscellaneous construction costs as shown in the application. These costs should be considered a part of the capitalized costs of the project and depreciated over the assets useful life. Therefore, Staff recommends that depreciation expense be increased an additional \$6,247 ($\$256,140 \text{ cost} / 41 \text{ years}$). Staff determined the useful life of 41 years based on the weighted average useful life of the tangible plant costing \$771,860.

Staff increased depreciation expense by an additional \$118 ($\$2,961 \text{ meter supplies} / 25 \text{ year depreciable life}$) for meter supplies that were previously capitalized by Staff in item D.

The net increase to depreciation expense is \$25,782 ($\$19,417 + \$6,247 + \118).

ATTACHMENT C
 STAFF REPORT CASE NO. 99-084
 COMPARISON OF HICKORY S AND STAFF S REVENUE REQUIREMENT
 CALCULATIONS

	Proposed by Hickory	Recommended by Staff
Pro Forma Operating Expenses	231,197	231,432
Plus: Existing Debt Principal and Interest ¹	61,683	61,520
Proposed KIA Loan ²	32,291	32,161
20% Debt Coverage ³	6,458	18,736
Less: Interest Income	(5,912)	(5,379)
Other Operating Revenue	<u>-</u>	<u>(6,386)</u>
 Total Revenue Required From Rates	 325,717	 332,084
Less: Pro Forma Present Rates	<u>252,759</u>	<u>243,381</u>
 Required Increase	 <u>72,958</u>	 <u>88,703</u>
Percentage Increase	<u>28.86%</u>	<u>36.45%</u>

1 Hickory s existing debt requirement was based on a three year average while Staff used a five year average.

2. Hickory s payment for the proposed KIA loan was calculated using 20 annual payments while Staff s was calculated using 40 semi-annual payments as required by the KIA Loan Commitment Letter dated September 28, 1998.

3. Hickory s debt coverage was calculated on the proposed KIA loan only. Staff included the existing bonds in its calculation as required by the existing bond resolutions.

ATTACHMENT D
STAFF REPORT CASE NO. 99-084
STAFF S RECOMMENDED RATES

Monthly Water Rates

3 /4 Meter

First	2,000 gallons	\$ 9.24	Minimum bill
Next	8,000 gallons	2.41	per 1,000 gallons
Next	90,000 gallons	1.98	per 1,000 gallons
Over	100,000 gallons	1.56	per 1,000 gallons

1 Meter

First	6,000 gallons	\$ 18.88	Minimum bill
Next	4,000 gallons	2.41	per 1,000 gallons
Next	90,000 gallons	1.98	per 1,000 gallons
Over	100,000 gallons	1.56	per 1,000 gallons

1 1/2 Meter

First	7,500 gallons	\$ 22.50	Minimum bill
Next	2,500 gallons	2.41	per 1,000 gallons
Next	90,000 gallons	1.98	per 1,000 gallons
Over	100,000 gallons	1.56	per 1,000 gallons

2 Meter

First	15,000 gallons	\$ 38.42	Minimum bill
Next	85,000 gallons	1.98	per 1,000 gallons
Over	100,000 gallons	1.56	per 1,000 gallons

3 and 4 Meters

First	100,000 gallons	\$206.72	Minimum bill
Over	100,000 gallons	1.56	per 1,000 gallons

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

In the Cost of Service Study, Staff has used the commodity demand methodology as set out in the American Water Works Association's (AWWA) Manual M-1. This study recognizes that a utility must be prepared for meeting average water use needs as well as peak demand requirements. The utility must be sized to meet the demands of the residential customers who place a larger demand on the system than the very large consumers. Consumers who use large amounts of water use it throughout the day and night and generally place a smaller demand on the system than residential customers who use water for a few hours each day.

The commodity demand method allocates costs into either commodity, demand or customer functions. Commodity costs are those costs that vary directly with the quantity of water produced such as chemicals and purchased power. Demand costs are associated with providing facilities to meet the peak demands placed on the system. These costs include transmission and distribution costs. Customer costs are those costs that are associated with serving the customers regardless of the amount of water used such as meter reading and billing and collecting.

Allocation of plant value shown at Sheet 1 allocates plant value into demand or customer. No plant value is allocated to commodity since the value does not change with amounts of water produced. Sheet 3 shows the allocation of expenses to the functional costs components. Administrative and general expenses are allocated based on the subtotal of all other expenses, excluding commodity costs. In order for Hickory to receive only the requested amount, depreciation expense has been decreased by \$7,927 from \$88,899 to \$80,972. Depreciation expense is then allocated based on the

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

percentages contained in Sheet 2. Debt service is based on the allocation of plant value percentages shown in Sheet 1.

Once operating and maintenance expense has been allocated, all other expenses and income must be allocated to the functional categories. Sheet 4 shows the allocation of expenses and other revenue based on Hickory s requested revenue. This sheet shows that \$35,267 should be collected from the commodity category, \$223,292 from the demand category, and \$65,598 from the customer category.

After costs have been allocated by function, a billing analysis must be reviewed to study the usage patterns of the customers of the utility. The chart on Sheet 5 shows Hickory s customer usage pattern. Currently, Hickory s rate design is a 7-step declining block schedule, with usage allowances of 2,000 gallons, 3,000 gallons, 5,000 gallons, 10,000 gallons, 30,000 gallons, 50,000 gallons, and over 100,000 gallons. Based on the usage patterns of Hickory s customers, the usage allowances has been changed to a 4-step declining block schedule, with usage allowances of 2,000 gallons, 8,000 gallons, 90,000 gallons, and over 100,000 gallons.

Sheet 6 shows the allocation of expenses to each usage increment based upon the requested revenue. The actual water sales percentages are used to allocate commodity costs. Demand costs are allocated using a weighted sales percentage in order to more fairly reflect the demand placed on the system. The allocations produce the rates that Staff recommends at Attachment D. Sheet 7 shows a verification schedule showing that the rates produced by the cost of service study will in fact produce the correct amount of revenue.

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

INDEX

Allocation of Plant Value	Sheet 1
Allocation of Depreciation	Sheet 2
Allocation of O/M Expenses	Sheet 3
Allocation of Cost of Service	Sheet 4
Water Usage Patterns	Sheet 5
Calculation of Water Rates	Sheet 6
Verification of Rates	Sheet 7
Comparison of Rates	Sheet 8

ATTACHMENT E
 STAFF REPORT CASE NO. 99-084
 STAFF S COST OF SERVICE STUDY

ALLOCATION OF PLANT VALUE
 SHEET 1

	Total	Commodity	Demand	Customer
Land & Land Rights	\$22,417		\$22,417	
Structures & Improvements	114,086		114,086	
Wells & Springs	151,755		151,755	
Pumping Equipment	14,364		14,364	
Water Treatment Equipment	43,540		43,540	
Distribution Reservoirs & Standpipes	352,066		352,066	
Transmission & Distribution Mains	1,509,621		1,509,621	
Services	92,336			92,336
Meters	309,076			309,076
Hydrants	64,376			64,376
Subtotal	\$2,673,637	\$0	\$2,207,849	\$465,788
Allocation Percentages (1)	100%		83%	17%
Office Furniture & Equipment	\$4,597	\$0	\$3,816	\$781
Total	\$2,678,234	\$0	\$2,211,665	\$466,569
Percentages	100%		83%	17%

ATTACHMENT E
 STAFF REPORT CASE NO. 99-084
 STAFF S COST OF SERVICE STUDY

ALLOCATION OF DEPRECIATION
 SHEET 2

	Total	Commodity	Demand	Customer
Structures & Improvements	\$44,890		\$44,890	
Wells & Springs	95,394		95,394	
Pumping Equipment	5,046		5,046	
Water Treatment Equipment	16,579		16,579	
Distribution Reservoirs & Standpipes	261,612		261,612	
Transmission & Distribution Mains	624,088		624,088	
Services	86,014			86,014
Meters & Meter Installations	105,093			105,093
Hydrants	61,503			61,503
Other Plant & Misc Equip	3,678			3,678
Total	\$1,138,310	\$0	\$885,700	\$252,610
Allocation Percentages	100%		78%	22%

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES
SHEET 3

	Total	Commodity	Demand	Customer
Purchased Power	\$25,573	\$25,573		
Chemicals	9,694	9,694		
Materials and Supplies	5,849		5,849	
Contractual Services				
Meter Reading	21,806			21,806
Plant Operator	10,176		10,176	
Billing Services	2,847			2,847
Engineering	275		275	
Testing	3,210		3,210	
Maintenance	21,588		21,588	
Meter Testing	215			215
Subtotal	\$101,233	\$35,267	\$41,098	\$24,868
Less Commodity	(35,267)			
Total	\$65,966		\$41,098	\$24,868
Allocation Percentages	100.00%		62.30%	37.70%
Administrative & General				
Commissioner Fees	7,200		4,486	2,714
Contractual Services				
Office Labor	12,356		7,698	4,658
Accounting	11,605		7,230	4,375
Other	5,593		3,484	2,109
Insurance	2,526		1,574	952
Miscellaneous	1,578		983	595
Subtotal	\$142,091	\$35,267	\$66,553	\$40,271
Taxes other than income	442		275	167
Depreciation (1)	\$80,972		\$63,158	\$17,814
Less:				
Other Operating Revenue	(6,386)			(6,386)
Interest Income	(5,379)			(5,379)
Operating Expenses	\$211,740	\$35,267	\$129,986	\$46,487
Debt Service(2)	\$112,417		\$93,306	\$19,111
Total Expenses	\$324,157	\$35,267	\$223,292	\$65,598

(1) Depreciation allocations based on 78% demand and 22% customer.

(2) Debt Service based on plant allocation percentages.

ATTACHMENT E
 STAFF REPORT CASE NO. 99-084
 STAFF S COST OF SERVICE STUDY

ALLOCATION OF COST OF SERVICE
 SHEET 4

	Total	Commodity	Demand	Customer
Operation and Maintenance	\$142,091	\$35,267	\$66,553	\$40,271
Taxes other than Income	\$442		275	167
Depreciation (1)	80,972		63,158	17,814
Debt Service (2)	112,417		93,306	19,111
General Water Service Cost	\$335,922	\$35,267	\$223,292	\$77,363
Less: Misc Income	(6,386)			(6,386)
Less: Interest Income	(5,379)			(5,379)
Revenue Required from Rates	\$324,157	\$35,267	\$223,292	\$65,598

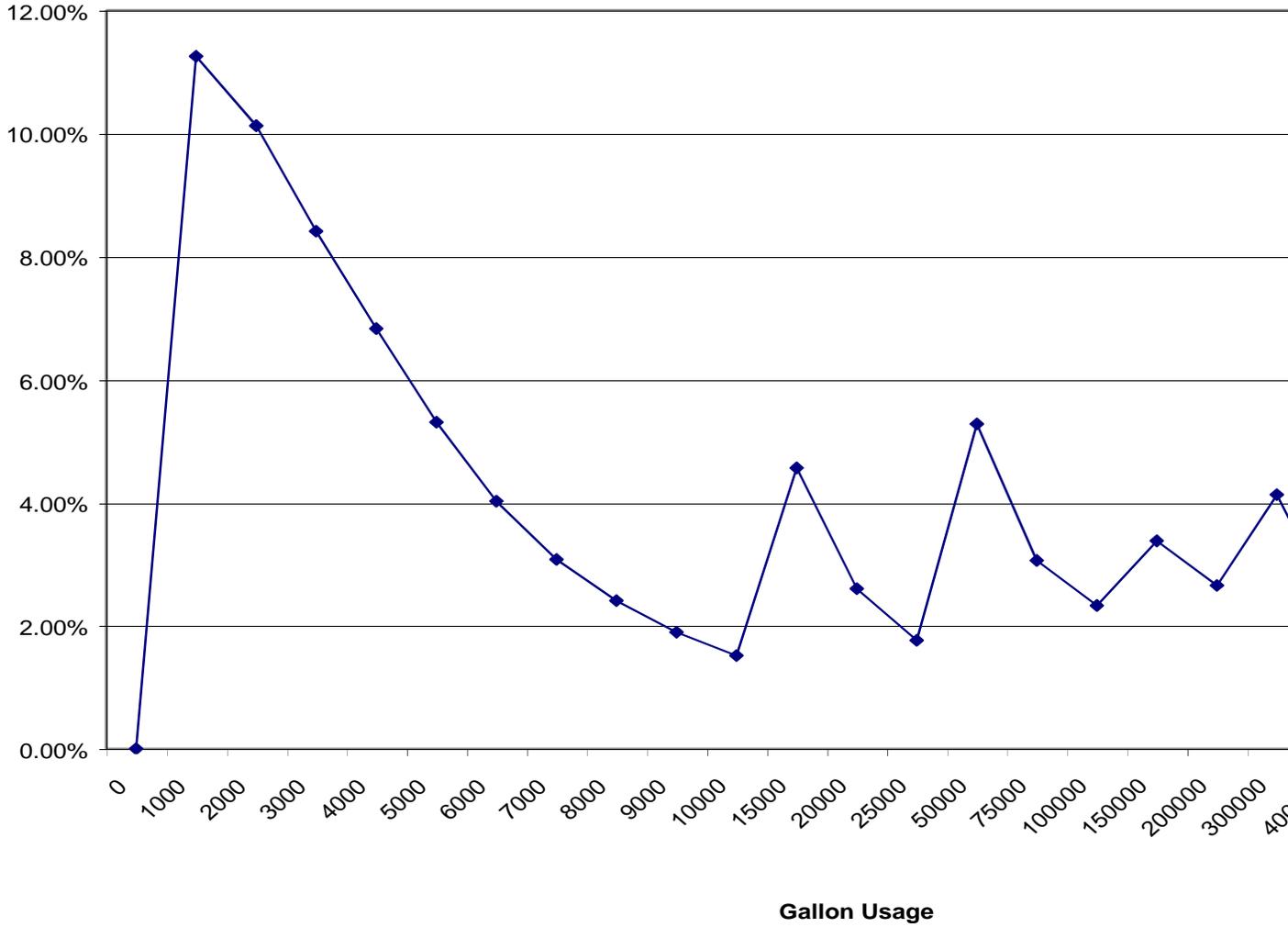
ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

USAGE PATTERNS
SHEET 5

ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

USAGE PATTERNS
SHEET 5



ATTACHMENT E
STAFF REPORT CASE NO. 99-084
STAFF S COST OF SERVICE STUDY

CALCULATION OF WATER RATES
SHEET 6

	Total	First 2,000	Next 8,000	Next 90,000	Over 100,000
Actual Water Sales:					
Thousand Gallons	119,063,270	24,313,890	38,094,400	23,333,080	33,321,900
	100.01%	20.42%	32.00%	19.60%	27.99%
Weighted Sales for Demand:					
Thousand Gallons	176,600,324	48,627,780	63,617,648	31,032,996	33,321,900
Percent	100.00%	27.54%	36.02%	17.57%	18.87%
Allocation of Volumetric Costs:					
Commodity	\$35,267	\$7,202	\$11,285	\$6,912	\$9,871
Demand	223,292	61,495	80,430	39,232	42,135
Customer	65,598	65,598			
Total	\$324,157	\$134,295	\$91,715	\$46,144	\$52,006
Number of Bills		14,539			
Proposed Rates		\$9.24	\$2.41	\$1.98	\$1.56

ATTACHMENT E
 STAFF REPORT CASE NO. 99-084
 STAFF S COST OF SERVICE STUDY

VERIFICATION OF RATES
 SHEET 7

	Bills	Gallons	Rate	Revenue
First 2,000 gallons	14,539	24,313,890	\$9.24	\$134,340.36
Next 8,000 gallons		38,094,400	2.41	91,807.50
Next 90,000 gallons		23,333,080	1.98	46,199.50
Over 100,000 gallons		33,321,900	1.56	51,982.16
Revenue from Rates				\$324,329.52
Interest Income				5,379.00
Other Operating Revenue				6,386.00
Total Revenue	14,539	119,063,270		\$336,094.52

ATTACHMENT E
 STAFF REPORT CASE NO. 99-084
 STAFF S COST OF SERVICE STUDY

COMPARISON OF RATES
 SHEET 8

Gallon Usage	Current Rates	Cost of Service Rates	Increase	Percentage
2000	\$6.50	\$9.24	\$2.74	42.15%
3000	9.20	11.65	\$2.45	26.63%
4000	11.90	14.06	\$2.16	18.15%
5000	14.60	16.47	\$1.87	12.81%
6000	16.60	18.88	\$2.28	13.73%
7000	18.60	21.29	\$2.69	14.46%
8000	20.60	23.70	\$3.10	15.05%
9000	22.60	26.11	\$3.51	15.53%
10000	24.60	28.52	\$3.92	15.93%
15000	32.85	38.42	\$5.57	16.96%
20000	41.10	48.32	\$7.22	17.57%
25000	47.10	58.22	\$11.12	23.61%
30000	53.10	68.12	\$15.02	28.29%
35000	59.10	78.02	\$18.92	32.01%
50000	77.10	107.72	\$30.62	39.71%
75000	98.35	157.22	\$58.87	59.86%
100000	119.60	206.72	\$87.12	72.84%
200000	189.60	362.72	\$173.12	91.31%

ATTACHMENT F
STAFF REPORT CASE NO. 99-084
SUMMARY OF STAFF S BILLING ANALYSIS

ATTACHMENT F
STAFF REPORT CASE NO. 99-084
SUMMARY OF STAFF S BILLING ANALYSIS

Meter Size	Gallons Sold	Revenue
3/4"	70,058,170	\$194,115.44
1"	2,829,800	4,937.60
1 1/2"	4,691,200	6,373.71
2"	12,852,400	14,094.76
3" and up	23,231,700	19,484.98
Totals	113,663,270	\$239,006.49

ATTACHMENT F
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF STAFF S BILLING ANALYSIS

TOTAL	139	2,829,800	475,400	208,000	342,000	557,700	456,300
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REVENUE TABLE / CURRENT RATES
 REVENUE BY RATE INCREMENT

		BILLS	GALLONS	RATE	REVENUE
FIRST	6,000	139	475,400	\$16.60	\$2,307.40
NEXT	4,000		208,000	2.00	416.00
NEXT	10,000		342,000	1.65	564.30
NEXT	30,000		557,700	1.20	669.24
NEXT	50,000		456,300	0.85	387.86
OVER	100,000		790,400	0.75	592.80
TOTAL		139	2,829,800		\$4,937.60

ATTACHMENT F
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF STAFF S BILLING ANALYSIS

USAGE TABLE FOR 1 1/2" METER

	USAGE	BILLS	GALLONS	7,500	2,500	10,000	30,000	50,000	
FIRST	7,500	21	54,500	54,500					
NEXT	2,500	2	17,200	15,000	2,200				
NEXT	10,000	8	123,900	60,000	20,000	43,900			
NEXT	30,000	27	916,700	202,500	67,500	270,000	376,700		
NEXT	50,000	23	1,606,000	172,500	57,500	230,000	690,000	456,000	
NEXT	100,000	11	1,972,900	82,500	27,500	110,000	330,000	550,000	
TOTAL		<u>92</u>	<u>4,691,200</u>	<u>587,000</u>	<u>174,700</u>	<u>653,900</u>	<u>1,396,700</u>	<u>1,006,000</u>	

REVENUE TABLE / CURRENT RATES
 REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	7,500	92	587,000	\$19.60	\$1,803.20
NEXT	2,500		174,700	2.00	349.40
NEXT	10,000		653,900	1.65	1,078.94
NEXT	30,000		1,396,700	1.20	1,676.04
NEXT	50,000		1,006,000	0.85	855.10
OVER	100,000		872,900	0.70	611.03
TOTAL		<u>92</u>	<u>4,691,200</u>		<u>\$6,373.71</u>

ATTACHMENT F
STAFF REPORT CASE NO. 99-084
SUMMARY OF STAFF S BILLING ANALYSIS

USAGE TABLE FOR 2" METER

	USAGE	BILLS	GALLONS	15,000	5,000	30,000	50,000	100,000
FIRST	15,000	62	190,300	190,300				
NEXT	5,000	5	91,700	75,000	16,700			
NEXT	30,000	14	509,000	210,000	70,000	229,000		
NEXT	50,000	15	1,128,500	225,000	75,000	450,000	378,500	
OVER	100,000	38	10,932,900	570,000	190,000	1,140,000	1,900,000	7,132,900
TOTAL		134	12,852,400	1,270,300	351,700	1,819,000	2,278,500	7,132,900

REVENUE TABLE / CURRENT RATES
REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	15,000	134	1,270,300	\$32.85	\$4,401.90
NEXT	5,000		351,700	1.65	580.31
NEXT	30,000		1,819,000	1.20	2,182.80
NEXT	50,000		2,278,500	0.85	1,936.73
OVER	100,000		7,132,900	0.70	4,993.03
TOTAL		134	12,852,400		\$14,094.76

ATTACHMENT F
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF STAFF S BILLING ANALYSIS

USAGE TABLE FOR 3 METERS AND UP

	USAGE	BILLS	GALLONS	FIRST 100,000	OVER 100,000
FIRST	100,000	17	426,300	426,300	
OVER	100,000	30	22,805,400	3,000,000	19,805,400

TOTAL		<u>47</u>	<u>23,231,700</u>	<u>3,426,300</u>	<u>19,805,400</u>
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REVENUE TABLE / CURRENT RATES
 REVENUE BY RATE INCREMENT

	BILLS	GALLONS	RATE	REVENUE	
FIRST	100,000	47	3,426,300	\$119.60	\$5,621.20
OVER	100,000		19,805,400	0.70	13,863.78

TOTAL		<u>47</u>	<u>23,231,700</u>		<u>\$19,484.98</u>
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ATTACHMENT G
STAFF REPORT CASE NO. 99-084
SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
BILLING ANALYSIS

Meter Size Gallons Sold		Revenue
3/4"	70,058,170	\$254,062.26
1"	2,829,800	6,784.00
1 1/2"	4,691,200	9,051.82
2"	12,852,400	20,085.26
3" and up	28,631,700	34,174.05
Totals	119,063,270	\$324,157.39

ATTACHMENT G
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
 BILLING ANALYSIS

USAGE TABLE FOR 3 / 4 METER

	USAGE	BILLS	GALLONS	2,000	3,000	5,000	10,000	30,000
FIRST	2,000	4,038	3,498,090	3,498,090				
NEXT	3,000	5,177	18,152,900	10,354,000	7,798,900			
NEXT	5,000	3,632	25,248,100	7,264,000	10,896,000	7,088,100		
NEXT	10,000	995	13,264,180	1,990,000	2,985,000	4,975,000	3,314,180	
NEXT	30,000	237	6,803,400	474,000	711,000	1,185,000	2,370,000	2,063,400
NEXT	50,000	30	1,971,200	60,000	90,000	150,000	300,000	900,000
OVER	100,000	6	1,120,300	12,000	18,000	30,000	60,000	180,000
TOTAL		14,115	70,058,170	23,652,090	22,498,900	13,428,100	6,044,180	3,143,400

REVENUE TABLE / PROPOSED RATES
 REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	2,000	14,115	23,652,090	\$7.90	\$111,508.50
NEXT	3,000		22,498,900	3.65	82,120.99
NEXT	5,000		13,428,100	2.90	38,941.49
NEXT	10,000		6,044,180	2.40	14,506.03
NEXT	30,000		3,143,400	1.75	5,500.95
NEXT	50,000		771,200	1.25	964.00
OVER	100,000		520,300	1.00	520.30
TOTAL		14,115	70,058,170		\$254,062.26

ATTACHMENT G
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
 BILLING ANALYSIS

USAGE TABLE FOR 1" METER

	USAGE	BILLS	GALLONS	6,000	4,000	10,000	30,000	50,000
FIRST	6,000	85	151,400	151,400				
NEXT	4,000	4	32,000	24,000	8,000			
NEXT	10,000	24	322,000	144,000	96,000	82,000		
NEXT	30,000	10	277,700	60,000	40,000	100,000	77,700	
NEXT	50,000	10	656,300	60,000	40,000	100,000	300,000	156,300
NEXT	100,000	6	1,390,400	36,000	24,000	60,000	180,000	300,000
TOTAL		<u>139</u>	<u>2,829,800</u>	<u>475,400</u>	<u>208,000</u>	<u>342,000</u>	<u>557,700</u>	<u>456,300</u>

REVENUE TABLE / PROPOSED RATES
 REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	6,000	139	475,400	\$21.75	\$3,023.25
NEXT	4,000		208,000	2.90	603.20
NEXT	10,000		342,000	2.40	820.80
NEXT	30,000		557,700	1.75	975.98
NEXT	50,000		456,300	1.25	570.38
OVER	100,000		790,400	1.00	790.40
TOTAL		<u>139</u>	<u>2,829,800</u>		<u>\$6,784.00</u>

ATTACHMENT G
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
 BILLING ANALYSIS

USAGE TABLE FOR 1 1/2" METER

	USAGE	BILLS	GALLONS	7,500	2,500	10,000	30,000	50,000
FIRST	7,500	21	54,500	54,500				
NEXT	2,500	2	17,200	15,000	2,200			
NEXT	10,000	8	123,900	60,000	20,000	43,900		
NEXT	30,000	27	916,700	202,500	67,500	270,000	376,700	
NEXT	50,000	23	1,606,000	172,500	57,500	230,000	690,000	456,000
NEXT	100,000	11	1,972,900	82,500	27,500	110,000	330,000	550,000
TOTAL		92	4,691,200	587,000	174,700	653,900	1,396,700	1,006,000

REVENUE TABLE / PROPOSED RATES
 REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	7,500	92	587,000	\$26.10	\$2,401.20
NEXT	2,500		174,700	2.90	506.63
NEXT	10,000		653,900	2.40	1,569.36
NEXT	30,000		1,396,700	1.75	2,444.23
NEXT	50,000		1,006,000	1.25	1,257.50
OVER	100,000		872,900	1.00	872.90
TOTAL		92	4,691,200		\$9,051.82

ATTACHMENT G
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
 BILLING ANALYSIS

USAGE TABLE FOR 2" METER

	USAGE	BILLS	GALLONS	15,000	5,000	30,000	50,000	100,000
FIRST	15,000	62	190,300	190,300				
NEXT	5,000	5	91,700	75,000	16,700			
NEXT	30,000	14	509,000	210,000	70,000	229,000		
NEXT	50,000	15	1,128,500	225,000	75,000	450,000	378,500	
OVER	100,000	38	10,932,900	570,000	190,000	1,140,000	1,900,000	7,132,900
TOTAL		134	12,852,400	1,270,300	351,700	1,819,000	2,278,500	7,132,900

REVENUE TABLE / PROPOSED RATES
 REVENUE BY RATE INCREMENT

	USAGE	BILLS	GALLONS	RATE	REVENUE
FIRST	15,000	134	1,270,300	\$45.35	\$6,076.90
NEXT	5,000		351,700	2.40	844.08
NEXT	30,000		1,819,000	1.75	3,183.25
NEXT	50,000		2,278,500	1.25	2,848.13
OVER	100,000		7,132,900	1.00	7,132.90
TOTAL		134	12,852,400		\$20,085.26

USAGE TABLE FOR 3" METERS AND UP

	USAGE	BILLS	GALLONS	FIRST 100,000	OVER 100,000
FIRST	100,000	17	426,300	426,300	
OVER	100,000	42	28,205,400	4,200,000	24,005,400

ATTACHMENT G
 STAFF REPORT CASE NO. 99-084
 SUMMARY OF REVENUES USING HICKORY S PROPOSED RATES IN STAFF S
 BILLING ANALYSIS

TOTAL	59	28,631,700	4,626,300	24,005,400			
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REVENUE TABLE / PROPOSED RATES
 REVENUE BY RATE INCREMENT

		BILLS	GALLONS	RATE	REVENUE
FIRST	100,000	59	4,626,300	\$172.35	\$10,168.65
OVER	100,000		24,005,400	1.00	24,005.40

TOTAL	59	28,631,700		\$34,174.05			
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